CHEMICAL & ENGINEERING NEWS

C&EN

JUNE 27, 1994

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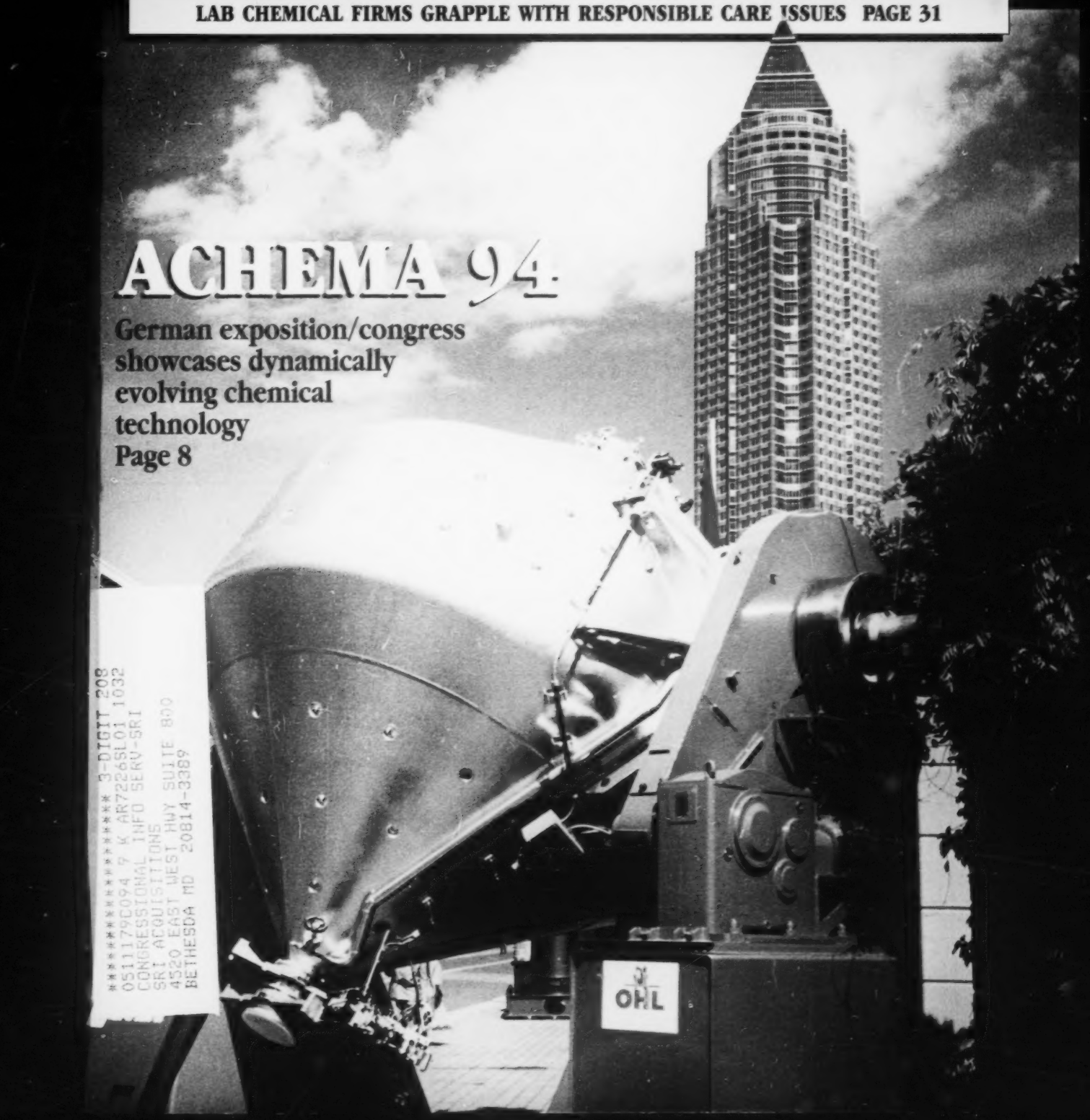
LAB CHEMICAL FIRMS GRAPPLE WITH RESPONSIBLE CARE ISSUES PAGE 31



ACHEMA 94

German exposition/congress showcases dynamically evolving chemical technology
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JUNE 27, 1994

NEWS OF THE WEEK

- OxyChem agrees to pay New York State $98 million to settle their 14-year legal battle over the contamination and cleanup of the Love Canal area. **Page 4**
- Evidence that tobacco companies manipulate the nicotine content of cigarettes is described by FDA head Kessler at a House hearing. **Page 5**
- Unilever scientists reveal some of the chemistry behind a controversial new detergent formulation, based on catalysis by organomanganese complexes. **Page 5**
- An explosion during chemical synthesis rocks United Chemical Technologies plant near Philadelphia, injures 31 people. **Page 6**
- Extraordinary enhancement of enantioselectivity by use of a magnetic field—reported in a paper published in February—has been found to be based on fraud by a graduate student. **Page 7**
- "That's the way the ball bounces" takes on new meaning as an improved plastic soccer ball debuts at the World Cup championship matches. **Page 7**

COVER: Photo courtesy of DECHEMA

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BUSINESS

Companies that make and market lab and research chemicals see acquisitions as key to competitiveness in an industry facing increasing obligations under Responsible Care program. **Page 31**

Chemical sales pick up in most European countries, but employment in the European chemical industry continues to decline for the fourth consecutive year. **Page 33**

GOVERNMENT

National Academy of Sciences' forum on scientific integrity draws more than 200 university, government officials into lively discussion on promoting ethical conduct in research. **Page 35**

Clashing provisions in Administration's pesticide reform legislation spark debate at Congressional hearing. **Page 37**

SCIENCE/TECHNOLOGY

Unsteady-state catalytic oxidation process that removes volatile organic compounds from industrial exhaust streams is becoming available in the U.S. **Page 42**

BOOKS

"From Chemical Philosophy to Theoretical Chemistry," a well-written sociological history of chemists and physicists falls short as a history of chemistry and physics. **Page 44**

ACS NEWS

ACS member dues for 1995 will remain at this year's level, but division and local section allocations will rise modestly. **Page 48**

NEWS FOCUS

ACHEMA 94, Germany's triennial chemical engineering exhibition and congress, showcased products and developments in traditional sectors, highlighted frontier areas, and attracted more than 3,400 exhibitors despite strained European economies. Page 8

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Chemical & Engineering News
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Published by
AMERICAN CHEMICAL SOCIETY
(202) 872-4600; TDD (202) 872-4432
John Kistler Crum, Executive Director
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Subscription Rates 1994: Printed editions: nonmembers U.S. 1 yr. $115, 2 yr. $207; outside U.S. 1 yr. $152, 2 yr. $281. Air freight rates available on request. Rates above do not apply to nonmember subscribers in Japan, who must enter subscription orders with Maruzen Co. Ltd., 3-10 Nihonbashi 2-chome, Chuo-ku, Tokyo 103, Japan. Tel: (03) 272-7211. Single copies: Current $18. Rates for back issues and volumes are available from Microforms & Back Issues Office, ACS, 1155—16th St., N.W., Washington, D.C. 20036. Back and current issues available on microfilm and microfiche. Rates on request from Microform Program, ACS.

Chemical & Engineering News (ISSN 0009-2347) is published weekly except for the last week in December by the American Chemical Society at 1155—16th St., N.W., Washington, D.C., 20036. Second-class postage paid at Washington, D.C., and additional mailing offices. POSTMASTER: Send address changes to C&EN, Member & Subscriber Services, P.O. Box 3337, Columbus, Ohio 43210. ACS assumes no responsibility for the statements and opinions advanced by the contributors to its publications.

Advertising Management: CENTCOM LTD.
(For list of offices see page 63)
Office of Ombudsman: (800) ACS-5558, No. 5-4
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LETTERS

What is 'chemical'?

Michael Heylin's perception of what is "chemical" is as narrow, if not narrower than that of the public (C&EN, May 9, page 3). He states that "in the public mind, chemical is synonymous with synthetic chemical [and that] is a cultural, linguistic thing." Following this logic, the fact that chemists "perceive all tangible things as chemical in nature, with no fundamental difference between synthetic chemicals and those that occur naturally" is then also a cultural, linguistic thing; that is, the culture and linguistics of the scientific enterprise by which chemists have been trained and molded.

Furthermore, Heylin believes that the chemists' perception of chemical is "appropriate" so that we live in a "chemical world" and "totally chemical environment." Perhaps. However, is this the kind of perception that gives chemists and industrialists the poor image they have? Is this the kind of perception that allows chemical pollution? The top producer of chemicals is also the top polluter.

Heylin's view of education's role in this dilemma is also narrow, if not insulting. He states, "Well-conceived education programs are necessary but not sufficient for alleviating public concerns about chemicals." Alleviating public concerns is not education, it is propaganda and public relations. Education or being educated is to be capable of thinking and analyzing critically all the various aspects of a situation. He then states that "dialogue and understanding" are essential. I agree. But Heylin seems to simply humor public concerns that are "not well founded" or "just wrongheaded" with "dialogue and understanding."

With these kinds of sentiments, I agree with Heylin that "chemists have little chance of convincing the public about the chemical world."

F. C. S. Tsai
Department of Chemistry
University of British Columbia
Vancouver

The May 30 issue of C&EN (page 3) includes yet another attempt, this time by reader A. R. Patton, to come up with a sensible definition of the word "chemical." But a few pages later, in an ad, we read, "This creates some difficult challenges, as constant exposure to water, chemicals, UV degradation, and friction all take their toll." Once again, chemicals are the bad guys.

How can we expect the general public to get it right when we chemists, writing for chemists, can't seem to do so?

Rick Smith
Geneseo, N.Y.

D-Day, the 6th of June

Congratulations on your insightful editorial, D-Day, the 6th of June (C&EN, June 6, page 3). It was the best editorial I can remember in my 45 years of reading C&EN, and a pleasant surprise to an ex-combat infantryman of World War II.

In one short page you gave the ACS's tribute to those who stormed the beaches that day and gave a great history lesson as well. You gave credit to the significant role of the British and Canadians, recognized the enormous contribution of the Soviet Union in defeating Germany's ground forces, and identified D-Day as the key to the assumption of world dominance by the U.S.

More poignantly, you used D-Day to illustrate the incredible sacrifices of war, the utter confusion and chaos of infantry combat, and the importance of individual initiative in winning battles. But most of all, you showed some understanding of the effects of combat on the human psyche. Pretty good for a chemical magazine.

Dick Mansfield
Grantham, N.H.

I believe that the beach that gave the American troops landing on D-Day the most trouble was Omaha, not Utah, as stated in your editorial of June 6.

Thomas J. Curphey
Dartmouth Medical School
Department of Pathology
Hanover, N.H.

Editor's note: Curphey is one of several readers who have written to make the same point. They are correct.

Correction:

- June 20, page 3: An item in the table of contents misstated the name of the company involved in a proposed $4.2 billion settlement plan for silicone breast implants. The company is Dow Corning, not Dow.

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CEFIC sees better outlook for Europe in 1994

The Western European chemical industry is expected to benefit—if only modestly—from the economic recovery currently under way. That was the message from the European Chemical Industry Council (CEFIC) at its annual meeting, held this year at Lake Como, near Milan, Italy.

CEFIC's annual report, released at the meeting, showed that business conditions have paved the way for at least halting steps toward recovery, as the value of chemical sales began picking up in the chemical industries of most of the federation's member countries. The number of employees throughout the industry, however, continued to fall.

As newly elected CEFIC president Simon de Bree, chairman of the Netherlands chemical company DSM, put it, "It is clear that we have the worst part of the recession behind us. The pace of growth is increasing, although slowly."

After several years of recession in the European economy, 1994 likely will bring a modest recovery, with gross domestic product in Western Europe rising about 1.5% from last year, led by exports and investments, CEFIC's economists predict. Prospects in other industries such as automobiles, plastics processing, electrical engineering, and iron and steel—all of which are heavy consumers of chemicals—are brightening, with growth rates predicted at an above-average forecast of 2% this year.

That encouraging outlook, in turn, has led CEFIC to slightly increase its growth expectations for the Western European chemical industry this year. Chemical output is now expected to rise 2%. At the beginning of the year, CEFIC was predicting only a 1.5% rise. The modest increase is certainly an improvement over the 1% annual decline in chemical production in 1993.

The industry is seeing changes in trends that have traditionally paralleled growth in sales, however. For example, because of the clampdown on health care budgets by a number of Western European governments, pharmaceuticals have ceased to be the dynamic sector they used to be in the chemical industry. Growth in sales of the pharmaceutical sector in 1994 is expected only to match that of the chemical industry as a whole, predicts the CEFIC economic staff.

Higher than average growth in sales is forecast for coatings, organics, and plastics. On the other hand, growth in sales is expected to be modest for inorganics and detergents. Growth in fertilizer sales may decline.

Profit margins and capacity utilization rates have remained low throughout much of the chemical industry, CEFIC points out. As a result, although interest rates have been easing through the region, prospects for growth in sales are still too uncertain to justify any brighter outlook than a bottoming out of investment in plant and equipment this year into early 1995. Capital investment, by and large, is not expected to increase this year in real terms, CEFIC economists say.

Employment likely will continue to decline for the fourth consecutive year; this year's drop is expected to run at about 3%, or 60,000 employees. Altogether, some 200,000 jobs have been lost since 1990, the economists point out. Moreover, with labor costs forecast to increase faster than producer prices, the preservation of already fragile profit margins will necessitate new productivity gains.

Cost-cutting and productivity-boosting efforts must continue for any upturn to begin to solve the structural problems of the Western European chemical industry, CEFIC glumly concludes.

However, those efforts will contribute to the industry's ability to compete, and according to de Bree, "Competitiveness will certainly be one of the main focal points of CEFIC in the next few years. It will be more difficult for the chemical industry to have its voice heard in Europe because of so many changes in the political field in Europe. This is all the more a reason to act together and speak with one voice."

As he sees it, "The global position of the European chemical industry is under threat. The competitive position has seriously declined compared with [that of] the U.S. chemical industry."

The chemical industry is not an exception in Europe, he pointed out. Other industries are also coping with a deteriorated competitive position. One result is that European nations' governments and the European Union (EU) are addressing the problem and working to establish a framework for maintaining or promoting industrial competitiveness. Enhanced competitiveness is particularly important in areas such as biotechnology issues, energy costs, mergers and joint ventures within the EU, and EU R&D programs.

On another front, CEFIC delegates were cheered by findings of a survey on the image of the chemical industry in Europe, conducted early this year in Belgium, the Netherlands, Spain, Italy, France, Germany, and the U.K. This survey followed an earlier effort by CEFIC in 1992.

According to de Bree, "The public largely recognizes the economic relevance of the chemical industry, and it also recognizes the progress made in environmental and safety performance. Moreover, the public is perceptive to more information" from the industry.

"The industry is becoming more credible as a source of information, and the public seems to be more interested in the chemical industry, which gives us a better chance for a constructive dialogue," says de Bree. "This may be the early fruit of the Responsible Care program," which CEFIC and its member national associations have put much effort into implementing. However, he adds, "much more has to be done before the public will have a sufficient understanding of and confidence in our industry."

Patricia Layman

Sales up for many countries, employee levels still down

	% change, 1992–93	
	Sales	Number of employees
Germany	−4.8%	−7.0%
France	1.1	−1.9
U.K.	11.9	−3.9
Italy	4.5	−3.6
Belgium	−0.7	−1.2
Spain	0.4	−3.0
The Netherlands	−8.1	−4.5
Switzerland	6.3	0.3
Sweden	13.6	−2.7
Ireland	8.2	0.7
Austria	−5.2	−5.3
Denmark	−0.3	1.1
Norway	2.3	−4.8
Poland	46.3	2.3
Hungary	12.3	−4.1
Czech Republic	−6.6	−6.4
Slovakia	2.5	−19.3
Turkey	19.2	−2.6

Note: Countries listed from top in order of chemical industry sales.
Source: European Chemical Industry Council